UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

Certified Mail
Return Receipt Requested

August 8, 2017

Mary Lou Capichioni, Director, Remediation Services
The Sherwin-Williams Company
101 Prospect Avenue, NW
Cleveland, OH 44115

RE: Site Characterization Summary Report, Waterbodies Operable Unit
The Sherwin-Williams / Hilliards Creek Superfund Site
Administrative Order on Consent / Index No. II CERCLA-02-99-2035

Dear Ms. Capichioni:

Thank you for the submittal of the March 31, 2017 Site Characterization Summary Report (SCSR) for the Waterbodies Operable Unit (OU) of the Sherwin Williams / Hilliards Creek Superfund Site.

Please incorporate the attached comments within the Remedial Investigation Report within thirty (30) days of receipt of this letter.

If you have any questions, please do not hesitate to contact me 212-637-4126 or Nace.Julie@epa.gov.

Sincerely,

Julie Nace
Remedial Project Manager
Central New Jersey Remediation Branch

cc: Lynn Vogel, NJDEP
Michael Pantliano, HDR
Rich Puvogel, EPA
Ray Klimcsak, EPA
Renee Gelblat, EPA

General Comments

1. The area of the Cooper River located below the Kirkwood Lake Dam will need further investigation to address the nature and extent of contamination. Depositional areas of the streambed should be sampled to ensure complete investigation of extent of the contamination.

2. All EPA data, sampled prior to the remedial investigation, should be removed from this document as well as from the figures, tables and appendices.

3. Soil data was only compared to the NJDEP's Residential Direct Contact Soil Remediation Standards (RDCSRS). Though comparison to these standards is correct for evaluating human health risks, this comparison is not appropriate when evaluating impacts to ecological receptors in environmentally sensitive natural resources (ESNR) areas. NJDEP reiterates that all data (i.e. soil, sediment, surface water, pore water) must be ultimately compared to the appropriate ecological screening criteria (ESC) as referenced in the February 2015 Ecological Evaluation Technical Guidance (EETG).

4. A review of the document indicates that transect line (names and locations) were referenced on figures associated with the lakes and not on figures representing Hilliards Creek. For ease of review, please include the transect lines (names and locations) on the figures associated with Hilliards Creek in the RIR.

5. The SCSR does not discuss the number and concentrations of TICs found, particularly in sediments. The presence and concentrations of TICs found in sediments may provide some insight on the interactions between surface water and groundwater and provide a more robust data set to define fate and transport of TICs across the site and across operable units.

6. The SCSR does not include data collected during the hex Chrome/EPH investigation that was summarized in the December 22, 2016 Tech Memo. Please include this data and any relevant discussion in the pending RIR.

7. Throughout the data discussion 'surface samples' are referenced in each subsection. It is not clear what is defined as a 'surface sample'. Clearly define 'surface samples' in the pending RIR. Please see specific comments.

8. In the sections that focus on surface water data there are several references that the presence of solids is influencing the analytical data. We agreed that solids, if present, may influence the chemistry of groundwater; however, these conclusions need to be supported by data with discussion. Please take out this conclusion as it is not supported with data.

9. For the pending Remedial Investigation Report, take out all discussion pertaining to Upper Hilliards Creek. Upper Hilliards Creek data may be left in the data tables for reference.

Specific Comments

1. Page ES-12, paragraph 4: Fish tissue results will have to be updated when new analysis results are received.

2. Page ES-12, second paragraph states "The lead concentrations were approximately 15 µg/L in all samples except one where the lead concentration reported at this location was 99.3 µg/L. It is suspected that solids entrainment in this sample likely influenced the reported concentration." Please provide the evidence that supports the position that the concentration of lead at KWDW0010 is suspected to be solids entrainment. It is noted that the field chemistries (i.e., turbidity), are not reported in the field notes and the sample was not analyzed for total suspended solids. It is also noted that three other surface water locations had reported concentrations of lead over 60 µg/L.

3. Page ES-12, first paragraph states "The transport of constituents in surface water is almost exclusively by particle transport. The metals and organic (PAHs, PCBs, pesticides) constituents found in sediment preferentially sorb to the fine particles in the sediment and are not generally found in the dissolved-phase. There are exceptions to this, such as aluminum and iron, but generally the metals and organic constituents are not found in the dissolved-phase." Based on the data (see comment 1 above) the transport of lead in the dissolved phase cannot be ruled out. Please provide a discussion for the presence of lead in the dissolved phase.

4. Page 1-3, 1-4: All of Silver Lake will be including in the Waterbodies OU. Add acreage of Silver Lake.

5. Page 1-11, paragraph 6 states, "The NJDEP reported that the combined flow from the sewage treatment plants contributed more than 20% of the total flow into the lake." Is this the NJDEP 1989 report in the reference section?

6. Page 1-19 third paragraph states The results of the sampling in and adjacent to Kirkwood Lake were presented in the "Removal Action Addendum Report, Kirkwood Lake Sampling Program, Hilliard Creek Site" (WESTON, 2007a). Please correct typo by deleting "in ad".

7. Page 2-2: The document states, "The RDCSRS have been applied to all soil locations, regardless of land use. It is noted, however, that ecological criteria will be developed...for those areas where ecological exposures are the primary receptor. The

residential direct contact screening levels are used for comparison in all tables and figures where soil data are presented." As noted above, soil samples collected within ESNRs must be compared to the appropriate ESC.

8. Page 2-17 first Bullet states “As a result, elevated TSS was noted in the samples”. Based on Table 20, only one of the two samples reported TSS above the Surface Water Quality Standard. Please revise to reflect the data.

9. Page 4-1: List of tables and figures already provided in beginning of the document. This is a duplicate list.

10. Page 4-5 second full paragraph states “Lead is found at concentrations greater than the ESC in both upstream (SLDD0021-AA-AB, and SLDD0024-AA-AB) and downstream locations (SLDD0001-AA-AB, SLDD0002-AA-AB, SLDD0005-AA-AB, SLDD0006-AA-AB, SLDD0009-AA-AB, SLDD0010-AA-AB, SLDD0012-AA-AB, and SLDD0013-AA-AB) in Silver Lake (Figure 15).” Sample location SLDD0003 and SLDD0019 both are reported to have lead detected at concentrations above the ESC. Please revise the text to include these two sample locations.

11. Page 4-5, second paragraph: Take out conclusion based on anthropogenic causes. It is not supported.

12. Page 4-5 second to last paragraph states “In other locations, the arsenic concentrations from less than the ESC (9.79 mg/kg) to 14.8 mg/kg.” Please insert ‘ranged’ between ‘concentrations’ and ‘from’.

13. Page 4-8 first paragraph states “Benzo(a)pyrene was detected in all transect samples except SLDW0004.” Based on Figure 16, benzo(a)pyrene was detected at SLDW0004 at concentrations of 0.04 g/L and 0.22 g/L. Please revise the text in the pending RIR to reflect the data.

14. Page 4-13 last bullet states “The sediment samples from the 0.0’ – 0.5’ interval at locations BWDD0001 and BWDD0003, located in the northwestern portion of Bridgewood Lake, near U.S. Avenue, contain significantly higher PAH concentrations than any other sampling location in the lake.” Based on Figure 19, sample locations BWDD0001 and BWDD0003 are located in the southwestern portion of Bridgewood Lake near West Clementon Road. Please revise the sentence to reflect the actual sampling locations.

15. Page 4-14 last paragraph states “The influence of suspended solids is also evident in the results reported for barium, copper, lead, zinc and silver. Each of these constituents was

reported at concentrations greater than the surface water standards in one or more Bridgewood Lake sampling locations during the September 2005 (dry) event. However, during the October 2005 (wet) sampling event, only silver and zinc were found at concentrations greater than the surface water standards, and they were found only intermittently and at relatively low concentrations in comparison to the surface water standards." Please add a narrative on how the sampling conditions (wet vs. dry) affected the suspended solid concentrations.

16. Page 4-19 second paragraph states "Note that sample TRA32A is considered to provide horizontal delineation for location HCSB0253." Based on Figure 24E, sample TRA32A does not provide lateral delineation along the northern reach of the transect. The TRA32A location is predominately downstream (to the west) of HCSB0253. Horizontal delineation of this point would be required during any PDI field work performed in the future. Please revise that statement.

17. Page 4-20 first paragraph states "Arsenic, lead and PAHs are found in soil at concentrations greater than the RDCSRS in this reach of Hilliards Creek (Figures 24G, 25G and 26H)." Based on Figure 24G, a localized cluster of samples that contains Aroclor-1254 exists. A narrative of the sample locations and data should be discussed in the pending RIR.

18. Page 4-22 Second paragraph states "Arsenic concentrations in surface sediments range from 6 mg/kg (HCDD0002) to 192 mg/kg (HCDD0003)." Based on Figures 27B and 28B, 'surface sediments' are limited to the 0.0-0.5 sample interval. If that is the case, then it should be clearly defined in the RIR.

19. Page 4-22 Second paragraph states "The highest concentrations of arsenic are found in samples collected from transects installed downstream of Bridgewood Lake." The highest concentration of arsenic in this area are located at HCDD0009 (601 mg/kg) and HCDD0011 (1,110mg/kg). Both of these sample locations are found along Hilliards Creek upstream of the merge between Hilliards Creek and the downstream branch of the Bridgewood Lake tributary. Please revise the text in the pending RIR to reflect the data.

20. Page 4-23 first (partial) paragraph states "Similar to the discussion of Upper Hilliards Creek, arsenic concentrations in other locations were more moderate, and ranged from approximately 12 mg/kg to approximately 50 mg/kg." It is not clear what is meant by 'other locations'. Please clarify 'other locations' in the RIR.

21. Page 4-23 first full paragraph states "Lead concentrations in surface sediments range from 44 mg/kg (HCDD0074) to 2,190 mg/kg (HCDD0013)." Based on Figures 27B and

28B, 'surface sediments' are limited to the 0.0-0.5 sample interval. If that is the case, then it should be clearly defined in the RIR.

22. Page 4-23 first full paragraph states "In general, the lead concentrations generally ranged from less than 100 mg/kg to approximately 400 mg/kg. Higher lead concentrations were found in three locations HCDD0007, HCDD0013 and HCDD0147)." Based on Figures 27B and 28B there are eight (out of nineteen) locations where lead was reported at concentrations greater than 400 mg/kg (HCDD0002, HCDD0006, HCDD0007, HCDD0009, HCDD0011, HCDD0013, HCDD0097, and HCDD0147). Based on the frequency of detections the narrative of the lead sentence does not accurately reflect the data. Please revise the text to accurately reflect the data in the pending RIR.

23. Page 4-23 second full paragraph states "Other metals (cadmium, chromium, copper, zinc), PAHs and pesticides are also found at concentrations greater than the ESC in surface sediment in this reach of Hilliards Creek." Based on Figure 27B, cyanide was also reported above the ESC. Please revise the text in the pending RIR to reflect this data.

24. Page 4-24 second paragraph states "The majority of surface sediment locations contained arsenic at concentrations less than 50 mg/kg and lead at concentrations less than 400 mg/kg." Based on Figures 28D and 28D, the 'surface sediments' appear limited to the 0.0-0.5 sample interval. If that is the case, then it should be clearly defined in the pending RIR.

25. Page 4-24, Based on Figure 28D there are at least twelve locations that were not vertically delineated (primarily for lead). We request a more robust narrative discussing this data is included in the pending RIR.

26. Page 4-25 second paragraph states "Arsenic concentrations in surface sediments range from 2.3 mg/kg (HCDD0051-SD-AA-AB) to 4,460 mg/kg (HCDD0060-SD-AA-AB)." Based on Figures 27E and 28E 'surface sediments' appear to be limited to the 0.0-0.5 sample interval. If that is the case, then it should be clearly defined in the pending RIR. It is also noted that HCDD0051 is located in Kirkwood Lake and not Hilliards Creek as the first sentence of this section discusses "This reach of Hilliards Creek…" It appears this discussion would be more appropriate in Section 4.3.2.6 of the SCSR. Please clarify these discrepancies in the pending RIR.

27. Page 4-25 third paragraph states "Lead concentrations in surface sediments range from 10.8 mg/kg (HCDD0046-SD-AA-AB) to 28,100 mg/kg (HCDD0060-SD-AA-AB)." Based on Figures 27E and 28E 'surface sediments' appear to be limited to the 0.0-0.5 sample interval. If that is the case, then it should be clearly defined in the RIR.

28. Section 4.3.2.5 and 4.3.2.6: Based on Figures 27Fand 28F, cyanide was detected in sediments in at least one sample location in each of the transects. Please discuss the presence of cyanide in the pending RIR.

29. Page 4-26 last paragraph first sentence: please correct typo by replacing 'easy' with 'east'.

30. Page 4-27 first paragraph states "Samples were analyzed for TCL PAHs, TCL PCBs, TAL metals (total), hardness, pH, and TOC." Based on Table 13, samples were also collected for TDS and TSS. Please clarify in the pending RIR.

31. Page 4-27 second paragraph states "The lead concentration at locations SW-07 and SW-08 were 646 and 700 µg/L, respectively, more than 10 times higher concentration than was measured at most other locations. One other sample location, located just east of Kirkwood Lake, had very elevated lead concentration (3,990 µg/L at HCDW0018). It is likely that these higher concentrations reflect entrainment of sediment during the sample collection. However, total suspended solids was not measured so this cannot be confirmed." For clarity and to substantiate the conclusion, we request a narrative on the concentration of total lead versus dissolved lead be included in the pending RIR.

32. Page 4-28: The document states, "As with surface water results, the variability in pore water results is likely to some extent a function of the presence of solids in samples." The RIR should include a discussion of pore water concentrations relative to that which was detected in co-located or nearby sediment, soil or surface water samples.

33. Page 4-28 third paragraph states "Most of these additional exceedances were within Areas 3 and 4, and primarily occurred during the September 2005 sampling event or the December 1999 sampling event." For the purpose of clarity please replace 'within Areas 3 and 4' with 'between the Wildlife Refuge and Kirkwood Lake."

34. Page 4-28 fourth paragraph states "Given the wide range in constituent concentrations found in Hilliards Creek, it is likely that to some extent the presence of solids in individual samples influenced the analytical results." Please provide additional information that supports this conclusion in the pending RIR or remove the statement.

35. Page 4-29 third paragraph states "As with the surface water results, the variability in pore water results is likely to some extent a function of the presence of solids in the samples." Please provide additional information that supports this claim in the pending RIR or remove the statement.

36. Page 4-30 second paragraph states “PAHs were found in only one location at a concentration greater than the RDCSRS, KWSB0032. The PAHs are horizontally and vertically delineated.” Based on Figure 32 and Table 15, there are two locations where PAHs are found at concentrations greater than the RDCSRS (KWSB0032 and KWSB0031). Additionally, based on Figure 30 and Table 15, PAHs are not vertically or horizontally delineated at KWSB0032. Please provide the data that demonstrates this point is delineated in the pending RIR or revise this statement.

37. Page 4-32 second paragraph states “At these depths, the “sediment” is actually the underlying native soil, and the concentrations of arsenic are below the RDCSRS for arsenic, which is based on background levels.” Please provide supporting literature that material collected beneath a water body should be compared to a soil standard.

38. Page 4-32 third paragraph states “The vertical distribution of lead was similar to that observed for arsenic, except that it was not found in the deeper coarse-grained material at a concentration greater than the ESC.” Based on the data presented, there appear to be exceptions to this statement (e.g., KWDD0040 and KWDD0100). Please provide clarification in the pending RIR.

39. Page 4-35 first paragraph states “PCBs were found much less frequently in of the samples obtained from 1.5’ – 2.0’ and deeper.” Please delete ‘of’.

Comments on Figures

1. There are a number of examples where compounds are listed twice at the same intervals for figures containing chem-boxes. These occurrences need to be explained in the ‘Notes’ section of the figure.

2. Figure 2 - Silver Lake: Exceedances colored incorrectly, label Cooper River as it comes into Kirkwood lake.

3. Figure 13: Please revise the depths in the cross sections from alphabetic coding to numeric and delete the depth interval key.

4. Figure 14: Sample location SLDD0017 is shown to be located in an upland area approximately 4 feet in elevation above the top of surface water (based on

topographic contours). Please verify and revise the figure as needed to show the actual sample location.

5. Figure 28E: There are chem-boxes that have a dashed line in place of a concentration for arsenic (ex. T10C). It is not clear what the dashed line represents. Please add a note in the legend to explain the dashed lines.

6. Figures 35A-C: All of the sampling depth intervals are not illustrated in the cross sections. Please include all of sample collection depths in the cross section for clarity.

7. Figure 36A: The chem-box for KWDD0089 is cut off at the bottom. Please revise.

8. Figure 37A: Sample location KG-SD-09 does not point to a sample location. Please add the sample location.

Comments on Tables

1. Table 13: Data sets for sample locations are missing (e.g., SW-07, SW-08). Please include this data in the pending RIR.